AMENDMENT TO CLAIMS

1. (Currently Amended) A semiconductor laser in which an n-type semiconductor layer, an active layer, and a p-type semiconductor layer are stacked in this order on a substrate;

the active layer comprising a well layer composed of InGaN;

the semiconductor laser comprising an intermediate layer sandwiched between the active layer and the p-type semiconductor layer;

the intermediate layer including no intentionally added impurities and being composed of a gallium nitride-based compound semiconductor;

the intermediate layer being composed of GaN or InGaN; [[and]]

with no p-type semiconductor layer being present between the active layer and the intermediate layer; and

the semiconductor laser comprising, between the substrate and the n-type semiconductor layer, a semiconductor layer having a low dislocation region with a threading dislocation density of not more than 5E8 cm^{-2}.

2. (Cancelled)

3. (Previously presented) A semiconductor laser according to claim 1, wherein the semiconductor laser is a Group III-V nitride semiconductor laser, the n-type semiconductor layer contains Si as an n-type impurity, and the p-type semiconductor layer contains Mg as a p-type impurity.

4. (Currently amended) A semiconductor laser according to claim 1, wherein the concentration of [[the]] a p-type impurity in the active layer is about 1E17 cm^{-3} or lower.

5. (Currently amended) A process for manufacturing a semiconductor laser, comprising the steps of:

forming on a substrate a semiconductor layer having a low dislocation region with a threading dislocation density of not more than 5E8 cm^{-2};

forming on the semiconductor layer ~~on a substrate~~ an n-type semiconductor layer doped with an n-type impurity;

forming on the n-type semiconductor layer an active layer comprising a well layer composed of InGaN;

forming on the active layer an intermediate layer composed of a gallium nitride-based compound; and

forming on the intermediate layer a p-type semiconductor layer doped with a p-type impurity,

wherein the intermediate layer is composed of GaN or InGaN and formed, without being doped with any impurities, so that no p-type semiconductor layer is present between the active layer and the intermediate layer.

6. (Previously presented) A semiconductor laser in which an n-type semiconductor layer, an active layer, and a p-type semiconductor layer are stacked in this order on a substrate;

the semiconductor laser comprising an intermediate layer sandwiched between the active layer and the p-type semiconductor layer and composed of a gallium nitride-based compound semiconductor;

the intermediate layer having a stacked structure comprising an undoped layer including no intentionally added impurities and a diffusion-blocking layer doped with an n-type impurity and substantially not doped with a p-type impurity; and the diffusion-blocking layer being located at a side adjacent to the p-type semiconductor layer; wherein the concentration of the n-type impurity in the diffusion-blocking layer is not lower than about 1E19 cm^{-3} and not higher than about 6E19 cm^{-3}.

7. (Original) A semiconductor laser according to claim 6, wherein the concentration of the n-type impurity in the diffusion-blocking layer is about the same or higher than that of the p-type impurity in the p-type semiconductor layer.

8. (Canceled)

9. (Previously presented) A semiconductor laser according to claim 6, wherein the semiconductor laser is a Group III-V nitride semiconductor laser, the n-type semiconductor layer contains Si as an n-type impurity, and the p-type semiconductor layer contains Mg as a p-type impurity.

10. (Original) A semiconductor laser according to claim 6, wherein, assuming that the thickness of the undoped layer is 1, the thickness of the diffusion-blocking layer is not less than 1/11 and not more than 11.

11. (Original) A semiconductor laser according to claim 10, wherein the thickness of the intermediate layer is not less than 15 nm and not more than 180 nm.

12. (Original) A semiconductor laser according to claim 6, wherein the active layer comprises a well layer composed of InGaN.

13. (Previously presented) A process for manufacturing a semiconductor laser, comprising the steps of:

forming on a substrate an n-type semiconductor layer doped with an n-type impurity;

forming on the n-type semiconductor layer an active layer comprising a well layer composed of InGaN;

forming on the active layer an intermediate layer composed of a gallium nitride-based compound; and

forming on the intermediate layer a p-type semiconductor layer doped with a p-type impurity,

wherein the step of forming the intermediate layer comprises the steps of growing a gallium nitride-based compound semiconductor layer without adding any impurities, thereby forming an undoped layer including no intentionally added impurities, and starting to add an n-type impurity without adding a p-type impurity in the course of the growth of the gallium nitride-

based compound semiconductor layer, thereby forming a diffusion-blocking layer; and wherein the concentration of the n-type impurity in the diffusion-blocking layer is not lower than about 1E19 cm^{-3} and not higher than about 6E19 cm^{-3}.

14. (Original) A process for manufacturing the semiconductor laser according to claim 13, wherein the step of forming the n-type semiconductor layer on the substrate is performed after selectively growing a nitride-based compound semiconductor layer in the lateral direction on the substrate.

15. (Previously presented) A semiconductor laser according to claim 1, wherein the thickness of the intermediate layer is not less than 60 nm and not more than 160 nm.

16. (New) A semiconductor laser according to claim 1, wherein the p-type semiconductor layer has a ridge-forming portion formed immediately over the low dislocation region.

17. (New) A semiconductor laser according to claim 1, wherein the active layer comprises a barrier layer doped with an n-type impurity.

18. (New) A semiconductor laser in which an n-type semiconductor layer, an active layer, and a p-type semiconductor layer are stacked in this order on a substrate;

the active layer comprising a well layer composed of InGaN;

the semiconductor laser comprising an intermediate layer sandwiched between the active layer and the p-type semiconductor layer;

the intermediate layer including no intentionally added impurities and being composed of a gallium nitride-based compound semiconductor;

the intermediate layer being composed of GaN or InGaN;

no p-type semiconductor layer being present between the active layer and the intermediate layer;

the semiconductor laser comprising, between the substrate and the n-type semiconductor layer, a stripe-like insulating pattern and a semiconductor layer formed between and over lines of the insulating pattern; and

the semiconductor layer having, over the lines of the insulating pattern, low dislocation regions with a lower dislocation density than regions between the lines of the insulating pattern.

19. (New) A semiconductor laser according to claim 18, wherein the p-type semiconductor layer has ridge-forming portions formed immediately over the low dislocation regions.

20. (New) A semiconductor laser according to claim 18, wherein the active layer comprises a barrier layer doped with an n-type impurity.

21. (New) A process for manufacturing a semiconductor laser, comprising the steps of:

forming a semiconductor layer between and above lines of stripe-like insulating pattern formed on a substrate;

forming on the semiconductor layer an n-type semiconductor layer doped with an n-type impurity;

forming on the n-type semiconductor layer an active layer comprising a well layer composed of InGaN;

forming on the active layer an intermediate layer composed of a gallium nitride-based compound; and

forming on the intermediate layer a p-type semiconductor layer doped with a p-type impurity;

the intermediate layer being composed of GaN or InGaN, and being formed without intentionally adding impurities and without any p-type semiconductor layer being present between the active layer and the intermediate layer; and

the semiconductor layer having, above lines of the insulating pattern, low dislocation regions having a lower dislocation density than regions between the lines of the insulating pattern.

22. (New) A semiconductor laser in which an n-type semiconductor layer, an active layer, and a p-type semiconductor layer are stacked in this order on a substrate;

the active layer comprising a well layer composed of InGaN;

the semiconductor laser comprising an intermediate layer sandwiched between the active layer and the p-type semiconductor layer;

the intermediate layer including no intentionally added impurities and being composed of a gallium nitride-based compound semiconductor;

the intermediate layer being composed of InGaN; and

with no p-type semiconductor layer being present between the active layer and the intermediate layer.

23. (New) A process for manufacturing a semiconductor laser, comprising the steps of:

forming on a substrate an n-type semiconductor layer doped with an n-type impurity;

forming on the n-type semiconductor layer an active layer comprising a well layer composed of InGaN;

forming on the active layer an intermediate layer composed of a gallium nitride-based compound; and

forming on the intermediate layer a p-type semiconductor layer doped with a p-type impurity,

wherein the intermediate layer is composed of InGaN and formed, without being doped with any impurities, so that no-p-type semiconductor layer is present between the active layer and the intermediate layer.